



International Commission on Mathematical Instruction

Quadrennial Activity and Financial Report (1.1.2010- 31.12.2013)

1. ORGANISATION

The International Commission on Mathematical Instruction was established at the Fourth International Congress of Mathematicians in Rome, 1908. Following interruptions in activity as a result of the First and Second World Wars, ICMI was reconstituted in 1952 and became an official commission of the [International Mathematical Union \(IMU\)](#).

ICMI General Assembly and ICMI EC

In the period 2010-13, two Executive Committees of the International Commission on Mathematical Instruction were in office: The 2010-12 ICMI EC and the 2013-16 ICMI EC. The 2010-12 ICMI EC was elected for a three-year term of office, instead of the usual four, because of the new procedure for the election of the ICMI EC adopted by the 2006 IMU General Assembly (GA) and bringing a shift for the election from the IMU GA to the ICMI GA.¹

The **First General Assembly of ICMI** was held in Monterrey on July 6, 2008, on the day prior to the opening of ICME-11. The costs for hosting the General Assembly were generously supported by the ICME-11 organisers. For the first time, the ICMI General Assembly was responsible for the election of the ICMI Executive Committee. The ICMI Nominating Committee was composed of Jeremy Kilpatrick (USA), chair, Michèle Artigue (France), László Lovász (Hungary), Attia Ashour (Egypt), Lee Peng Yee (Singapore), and Evgenia Sendova (Bulgaria). The Chair of the ICMI Nominating Committee, Jeremy Kilpatrick, attended the General Assembly in order to present the slate of candidates proposed by the Committee.

The elected members of the EC 2010-12 were:

- PRESIDENT: Bill Barton (New Zealand)
- SECRETARY-GENERAL: Jaime Carvalho E Silva (Portugal)
- VICE-PRESIDENTS (2): Mina Teicher (Israel) and Angel Ruiz (Costa Rica)
- MEMBERS AT LARGE (5):
- Mariolina Bartolini Bussi (Italy)
- Sung Je Cho (South Korea)
- Roger Howe (USA)
- Renuka Vithal (South Africa)
- Zhang Yingbo (China)

¹ An important consequence of the new procedure is that the election of the ICMI EC takes place at the General Assembly of ICMI (the first election was held in 2008 in Monterrey and the 2010-2012 ICMI EC was subsequently elected). The principles of the new election procedure had been agreed upon by the IMU and ICMI ECs in 2004, and refined in 2006. During these latter discussions, a new rule was then introduced stipulating, in accordance with the

Ex officio:

- Michele Artique (France, former ICMI President)
- Ingrid Daubechies (President of IMU)
- Martin Grötschel (Secretary of IMU)

As a consequence of the shift in the ICMI EC election from the IMU GA to the ICMI GA, the term of this EC was three years, beginning on January 1, 2010 and ending on December 31, 2012.

The 2010-2012 EC took office on January 1, 2010. The first meeting was held in Auckland on April 5-8, 2010, with all members present. Cheryl Praeger represented the IMU. It was decided to intensify contacts in order to increase the number of countries, which are members of ICMI, and to have the maximum number of active representatives. The financial situation of ICMI was discussed and it was decided to wait until a new IMU office was established by the IMU General Assembly to define the new structure. The possibility of the President being supported by his university with a half-time administrative assistant also arose. The need for close cooperation with IMU was reaffirmed and the continued expansion of ICMI development activities was agreed upon.

The second meeting of the 2010-2012 EC took place in Beijing, China on February 21-25, 2011. Cheryl Praeger represented the IMU. The major decision was the continued expansion of ICMI development activities in the form of the CANP (see below).

The third meeting of the 2010-2012 EC took place in Seoul, South Korea, on July 6-7 AND 15, 2012. The major conclusions reached focused on the continued expansion of ICMI development activities in the form of the Capacity and Network Project (CANP), and the launching of Study 23 on Primary Mathematics. Cheryl Praeger represented the IMU.

The Second General Assembly of ICMI was held in Seoul on July 5, 2012, on the day prior to the opening of ICME-12. The costs for hosting the General Assembly were generously supported by the ICME-12 organisers. For the second time this General Assembly was responsible for the election of the ICMI Executive Committee. The ICMI Nominating Committee was composed of Bernard R. Hodgson, Chair (Canada)*, Bill Barton (New Zealand)*, Ingrid Daubechies (USA)*², Jill Adler (South Africa), Shobha Madan (India), Nguyen Chi Thanh (Vietnam) and Dirk Siersma (The Netherlands). The Chair of the ICMI Nominating Committee for this election, Bernard Hodgson, attended the General Assembly in order to present the slate of candidates proposed by the Nominating Committee.



GA 2012, Seoul, Korea

The new Executive was elected, reports from affiliated organisations were received, and two topics were discussed: how to get teachers more involved in ICMI/ICME; and how to better support regional initiatives.

² *Core members.

The ICMI Executive Commission (2013-2016) members are:

- PRESIDENT: Ferdinando Arzarello (Italy)
- SECRETARY-GENERAL: Abraham Arcavi (Israel)
- VICE-PRESIDENTS (2): Cheryl Praeger (Australia) and Angel Ruiz (Costa Rica)
- MEMBERS AT LARGE (5):
- Jean-Luc Dorier (Switzerland)
- Yuriko Baldin (Brazil)
- Roger Howe (USA)
- Catherine P. Vistro-Yu (Philippines)
- Zahra Gooya (Iran)

Ex officio:

- Bill Barton (New Zealand) (Past President of ICMI)
- Ingrid Daubechies (President of IMU)
- Martin Grötschel (Secretary of IMU)

The next ICMI General Assembly will take place in Hamburg, Germany on Saturday, July 23, **2016**.

The first meeting of the 2013-2016 EC took place in Berlin, Germany, on May 22-24, 2013 and was generously supported by the IMU Secretariat. Cheryl Praeger represented the IMU, also IMU Secretary Martin Grötschel participated partially in the meeting. The major conclusions reached were the continued expansion of ICMI development activities in the form of the Capacity and Network Project (CANP), the expansion of the Klein Project; ICMI's involvement in the IMU symposium "Mathematics in Emerging nations, Achievements and Opportunities (MENA0)" at ICM in August 2014 and to strengthen the cooperation with Springer (ICMI Studies Publishing House). Furthermore the guidelines of ICMI Studies were finalized and ICMI channels of communication were reorganized.

Ferdinando Azarello attended the conference "21st Century Mathematics" in Stockholm, in April 2013. The meeting was considered to be of great importance (funded by Bill Gates, attended by prominent scholars), but did not produce a definite agenda for action.

Ferdinando Azarello attended a meeting in Moscow on the 2-6 October 2013 organized by Guenter Toerner (ICMI representative Germany) of the EMS Commission for Didactics.

Bill Barton participated on behalf of ICMI in the 2013 IMU- Committee for electronic information communication (CEIC) meeting in June 2013 in the UK.

IMU General Assembly

The President and the Secretary-General of ICMI were invited as ex officio observers to the General Assembly of IMU held in Bangalore in 2010. The President of ICMI presented a Report on ICMI activities to the General Assembly, and numerous contacts were made with the delegates of different countries. We can say that relations with IMU are excellent. In this General Assembly IMU decided to establish its new permanent office in Berlin. During the ICM, the President and the Secretary-General of ICMI had a meeting with the Secretary-General of IMU to prepare the transition to the new office that was established in early 2011.

IMU Secretariat

The IMU Secretariat based in Berlin, Germany started working in January 2011 and supports all ICMI activities. Lena Koch is the ICMI administrator and responsible for all administrative and organisational issues regarding ICMI. Other staff members in Berlin also assist ICMI, including the IMU Secretariat manager, the accountant, the IT and technical support staff and the IMU Archivist.

In 2013, two important ICMI events were held in the premises of the IMU Secretariat: The ICMI EC meeting in May as well as the Klein Meeting in September 2013. Both were financially supported by the funds of the IMU Secretariat (German Ministry of Education and Research and the City of Berlin). In January 2014, the IPC meeting of ICMI Study 23 was held in Berlin as well.

ICMI members and Representatives

Currently ICMI has 92 member countries. Each member country is required to elect an ICMI Representative who represents the ICMI member country at the ICMI General Assembly and has the (sole) voting right for the ICMI Executive Committee (ICMI EC). The ICMI representatives also inform the national communities of developments within ICMI.

In 2009 ICMI had 85 member countries. In the General Assembly of IMU in 2010, 4 new countries (*Cambodia, Moldova, Nepal, and Oman*) were admitted as Associate Members and 1 as full member (*Montenegro*). These countries automatically became members of ICMI. In 2011 ICMI had 90 member countries, 69 of which are also members of IMU and eight are associate members of IMU. In 2012 ICMI had 92 member countries, 70 of which are also IMU members and 10 are IMU associate members. Finally three new members were welcomed to the ICMI community in 2013: *Nepal, Madagascar, and Oman*.

2. THE INTERNATIONAL CONGRESS ON MATHEMATICAL EDUCATION (ICME)

ICME-11

The preparation of the Proceedings of ICME-11 has experienced substantial delay with respect to the planned schedule, and the past-ICMI EC met some difficulties at maintaining communication with those in charge of their preparation in Mexico. As of July 2014, the process has been re-established and publication (online only) is expected towards the end of 2014.

ICME-12

The ICMI Executive Committee had announced by the end of 2007 its decision to accept the invitation from Korea to host ICME-12 in 2012. Professor Sung Je Cho, of the Seoul National University, chaired the International Programme Committee of ICME-12. This IPC, whose composition was announced in the *ICMI Bulletin No. 63*, had its first meeting in Seoul on June 14-17, 2009. A first set of decisions was made during the meeting regarding the plenary activities of the congress as well as the list of Topic Study Groups. It was also decided to reorganise the functioning of some of the activities, such as the Discussion Groups. The IPC held its second meeting in February, 2011, in Jeju, Korea.

The congress itself took place in the COEX Convention Centre, in Seoul, on July 8-15, 2012. More than 3,600 participants from 84 countries participated. Information about the congress is available at:

<http://www.icme12.org>.

The proceedings for ICME-12 will be published in 2014 or early 2015.

ICME-13

A call for bids for ICME-13, to be held in 2016, was made by the Secretary-General at the closing ceremony of ICME-11 and in *ICMI Bulletin (No. 63)*. Potential bidders were invited to announce their intention by November 1, 2009, and three countries did so. Formal bids were due by November 1, 2010. The site visits were conducted in 2011 and the decision for ICME-13 was announced in 2011. Hamburg, Germany will host the next ICME-13 from 24-31, July, 2016. Professor Gabriele Kaiser of the University of Hamburg is chairing the International Programme Committee (IPC). The first IPC meeting was held from June 15-21, 2013 in Schlossgut Gross Schwansee, on the Baltic Sea near Hamburg. The President, Ferdinando Arzarello, and the Secretary General, Abraham Arcavi were present at the meeting. More than 3000 participants from 80 countries are expected to participate in ICMI-13. Information about the congress is available at: <http://icme13.org>

ICME-14

A call for intention to bid for ICME-14 in 2020 was distributed in 2012 globally and resulted in three “declarations of intent to host ICME-14, 2020”.

ICME Solidarity Fund

Each ICME devotes at least 10% of the registration fees to the ICME Solidarity Fund that allows organisers providing support to participants from developing countries for attending the Congress. For ICME-12, 155 participants were awarded grants, involving a total of USD 146,000. The distribution was made by a Grant Committee, jointly appointed by the congress organisers and the ICMI Executive Committee. The composition of the ICME-13 Solidarity Fund Committee consists of three ex-officio members: the Chairperson of the IPC (Gabrielle Kaiser), the Chairperson of the LOC (Marianne Nolte), the ICMI Secretary-General and three other members respectively representing the IPC (chosen by the IPC Chairperson), the LOC (chosen by the LOC Chairperson) and the ICMI EC (chosen by the EC). In 2013 the ICMI EC decided that ICMI Vice President Angel Ruiz and ICMI Secretary-General Abraham Arcavi will represent the ICMI EC. The Grants Committee will meet in February 2016 to make decisions.

3. ICMI AFFILIATE ORGANISATIONS

The Terms of Reference of ICMI were amended in 2009 to allow affiliation to ICMI not only to Study Groups focusing on a specific field of interest in mathematics education, as has been the case since 1976, but also to multi-national mathematical education societies, or to multi-national societies having a formal mathematical education subgroup.

ICMI's organisational outreach includes multi-national organisations with interest in mathematics education, operating consistently with the aims and values of the Commission. Affiliated organizations are independent from ICMI and are self-financed. They collaborate with ICMI on specific activities, such as the ICMI Studies or CANP. The ICMI Affiliate Organizations produce reports for the General Assembly of ICMI. There are currently four multi-national Mathematical Education Societies (one affiliated in 2011) and six international Study Groups affiliated to ICMI.

The multi-national Mathematics Education Societies currently affiliated to ICMI, with year of affiliation, are:

- CIAEM: Inter-American Committee on Mathematics Education (2009)
- CIEAEM: Intl. Commission for the Study and Improvement of Mathematics Teaching (2010)
- ERME: European Society for Research in Mathematics Education (2010)
- MERGA: Mathematics Education Research Group of Australasia (2011)

The Study Groups currently affiliated to ICMI, with their year of affiliation, are:

- HPM: The International Study Group on Relations between the History and Pedagogy of Mathematics (1976)
- ICTMA: The International Study Group for Mathematical Modelling and Applications (2003)
- IOWME: The International Organization of Women and Mathematics Education (1987)
- MCG: The International Group for Mathematical Creativity and Giftedness (2011)
- PME: The International Group for the Psychology of Mathematics Education (1976)
- WFNMC: The World Federation of National Mathematics Competitions (1994)

4. ICMI STUDIES

The ICMI Studies are a major ICMI programme. Each Study addresses an issue or topic of particular significance in contemporary mathematical education and is conducted by an international team of leading scholars and practitioners. Built around an international conference, it is directed towards the preparation of a published volume to promote discussion and action at the international, regional or institutional level. More than 21 volumes have been published between 1986 and 2012.

The 2010-2012 series editors were ICMI President Bill Barton and ICMI Secretary-General Jaime Carvalho E Silva. The series editors for 2013-2016 are ICMI President Ferdinando Azarello, Secretary-General Abraham Arcavi and ICMI Vice President Cheryl Praeger.

ICMI Studies published in 2010-2013 are:

ICMI Study 18: Statistics Education in School Mathematics: Challenges for Teaching and Teacher Education (August 2011) Editors: Carmen Batanero, together with Gail Burrill and Chris Reading. (NISS 14).

ICMI Study 19: The Role of Mathematical Reasoning and Proving in Mathematics Education (July 2012) Editors: Gila Hanna and Michael de Villiers (NISS 15).

ICMI Study 20: Educational Interfaces between Mathematics and Industry (organised jointly with the International Council for Industrial and Applied Mathematics (ICIAM), December 2013). Editors: Alain Damlamian Rudolf Sträßer and José Francisco Rodrigues (NISS 16).

ICMI Studies currently being published are:

ICMI Study 21: Mathematics Education and Language Diversity, Editors: Mamokgethi Setati and Maria do Carmo Domite (Universidade de São Paulo). The first meeting of the IPC was held in February 2009 and the Discussion Document was available early in 2010. The Study Conference took place in Águas de Lindóia, São Paulo, Brazil, on 16-20 September 2011. Both Co-chairs have since stepped down due to personal reasons. The website is <http://www.icmi-21.co.za>. The volume is now jointly edited by members of the IPC, coordinated by IPC member Richard Barwell (Canada) will be published in early 2015 (NISS 17).

ICMI Study 22: Task Design, The 2010-2012 Executive Committee launched this Study in 2010 on Task Design. The co-chairs are Anne Watson and Minoru Ohtani/ The IPC met in January 2012 in Oxford, UK. The Study Conference was held from July 22-26 2013 at the Department of Education, University of Oxford, UK and Ferdinando Arzarello and Abraham Arcavi represented the ICMI EC. Publication of the Study Volume is expected in early 2015.

Next ICMI Study:

ICMI Study 23: Primary Mathematics Study on Whole Numbers. The 2010-2012 EC launched this Study on December 2012 and appointed the Co-Chairs Mariolina Bartolini Bussi (Italy), and Sun Xuhua (China). The IPC has been appointed and started working in January 2013 when the first IPC meeting took place in Berlin, Germany. Abraham Arcavi, Ferdinando Arzarello and Roger Howe presented the ICMI EC. The study conference will take place in Macau, China in June 2014.

5. ICMI REGIONAL CONFERENCES

Launched in the mid-seventies, ICMI Regional Conferences aim to facilitate wider discussion of mathematical education issues in particular regions. They foster reflection, action and co-operation among mathematicians, mathematics educators and teachers. These meetings are supported morally by ICMI, sometimes with a modest financial contribution.

The ICMI EC accompanies the organisation of the following conferences so that they will be granted the status of ICMI Regional Conferences:

AFRICME: The Africa Regional Congress of ICMI on Mathematical Education was launched in 2005 and aims at offering a forum for mathematics educators throughout Africa. AFRICME 3 (the Third Africa Regional Congress of ICMI on Mathematical Education) under the theme “Mathematics as a Leading edge in the Education for All (EfA) Framework” in Gaborone, Botswana, on May 18-21, 2010. Renuka Vithal, member of the ICMI EC was a member of the Scientific Committee. The president of ICMI was present at this Congress. AFRICME 3 gathered 121 participants from 14 different countries, including 15 teachers. AFRICME-4 was hosted by the Lesotho College of Education, Faculty of Science on the 11-14 June, 2013 in Lesotho. Michele Artique presented ICMI and Ferdinando Arzarello gave a welcome address via live-streaming. More information can be found here: <http://www.mathunion.org/icmi/conferences/icmi-regional-conferences/past-conferences/>

Conferencia Iinteramericana de Educación Matemática

The XIII Conferencia Interamericana de Educación Matemática (CIAEM), took place in Recife, Brasil, on June 26-30, **2011**. This meeting coincided with the 50th anniversary of the Comité Interamericano de Educación Matemática (CIAEM), an organisation recently affiliated to ICMI. The ICMI EC was represented on the International Programme Committee by Michèle Artigue and Bernard R. Hodgson. More than 1,800 math educators, mathematicians and teachers from 33 countries met for five days and could follow 5 plenary talks, 4 plenary round tables (one of them dedicated to the work of Ubiratan D'Ambrosio), 30 parallel talks, 6 parallel round tables, and more than 700 contributed papers. In this meeting ICMI Study 18 was launched and an update of the Klein Project was presented to the participants. CIAEM-14 will be held in Mexico in May **2015**. <https://www.facebook.com/ciaem>

Espace Mathématique Francophone (EMF)

EMF: These conferences are defined in linguistic rather than geographical terms. The last one was held in Geneva, Switzerland, in February **2012**. The ICMI EC was represented on the International Programme Committee by Bernard R. Hodgson and Jaime Carvalho e Silva.

The sixth EMF conference, (EMF-2015) will be held in 2015 in Tipaza (Algeria) from October 10-14, 2015. Jean-Luc Dorier and Ferdinando Arzarello represent the ICMI-EC on the International Programme Committee (IPC).

[http://www.mathunion.org/icmi/events/details/?tx_ttnews\[tt_news\]=829&cHash=27033db6a2fd35703d9f546dec7fa48f](http://www.mathunion.org/icmi/events/details/?tx_ttnews[tt_news]=829&cHash=27033db6a2fd35703d9f546dec7fa48f)

EARCOME

The Fifth ICMI East Asia Regional Conference in Mathematics Education was held in Tokyo on August 18-22, **2010**, under the theme “In search of excellence of mathematics education”. The ICMI EC was represented on the International Programme Committee of this conference by Frederick Leung.

The **Sixth East Asia Regional Conference in Mathematics Education** “Innovations and exemplary practices in mathematics education” (EARCOME-6) was held in Phuket, Thailand on March 17-22, 2013. Bill Barton (New Zealand) and Bernard Hodgson (Canada) participated in the conference on behalf of the ICMI EC. During the conference the upcoming CANP workshop in Cambodia (October 2013) was discussed with members of the IPC and LOC. <http://earcome6.kku.ac.th/earcome/> EARCOME -7 will be held 2015 in the Philippines.

6. PIPELINE PROJECT

The final report of the “Pipeline Project” was presented at ICM **2010** in a panel chaired by the President of ICMI (2010-2012) Bill Barton. An update can be found in the July 2014 issue of the ICMI News.

<http://www.mathunion.org/pipermail/icmi-news/attachments/20140701/5707a76b/attachment.pdf>

7. THE KLEIN PROJECT

The Klein Project, inspired by Felix Klein’s book *Elementary Mathematics from an Advanced Standpoint*, published more than a century ago, provided mathematics teachers with knowledge of contemporary mathematics. The idea of this project is to revisit Felix Klein’s vision 100 years later.

The project is coordinated by a “Design Group” consisting of:

- Michèle Artigue, Université Paris Diderot, France
- Ferdinando Arzarello, Università degli Studi di Torino, Italy
- [Bill Barton](#), The University of Auckland, New Zealand (chair)
- William (Bill) McCallum, University of Arizona, USA
- Tomas Recio, Universidad de Cantabria, Spain
- Christiane Rousseau, Université de Montréal, Canada
- Hans-Georg Weigand, Universität Würzburg, Germany

- Yuriko Yamamoto Baldin, Universidade Federal de São Carlo, Brazil
- Graeme Cohen, University of Technology, Sydney, Australia (resigned in 2013)

Six meetings of the Design Group have taken place since 2009: in Paris in May, 2009, in Auckland in April, 2010, in the US in 2011, in Paris in 2012, in Berlin, Germany in 2013 and in Brazil in 2014.

Several Klein conferences and workshops took place in 2010 - 2013:

- In Castro-Urdiales, Spain (June 2010)
- In Belo Horizonte, Brazil (July 2010)
- a UK Klein Workshop has been held at Oxford University in June 2010
- a special Klein session was organized at Mathfest 2010 in Pittsburg (USA) in August 2010
- A meeting in Funchal, Portugal
- “Felix Klein days” were organized in **2011, 2012** and 2013 in Sweden
- Several Klein workshops were held in Brazil in 2011-2013
- a major week-long workshop of 30 people funded by AIM in Palo Alto (USA), 7-11 November 2011.
- Antoine Nectoux presented the Klein Project in Phnom Penh, Cambodia in March **2013**.
- A workshop “Elementary Mathematics from an Advanced Standpoint - Felix Klein and Mathematics for Teachers” was held in Berlin, Germany from September 17-20, 2013. The Klein workshop had 27 participants from 10 countries. Additionally a public day with secondary school teachers from Berlin and the region was held on Thursday, September 19, 2013 at the Humboldt University at Berlin and more than 80 secondary school teachers participated. The IMU Secretariat and the German Research Foundation (DFG) supported the workshop (each with a grant).

More information about the workshop can be found here: <http://www.mathunion.org/icmi/activities/klein-project/klein-workshop-berlin-2013/>

In **2012** the Klein Project has turned its primary focus to the production, dissemination, and trial (with teachers) of “Klein Vignettes” and up till now (July 2014) 23 vignettes (short articles for secondary school teachers of senior mathematics classes) have been published and some translated into several languages.

A wiki site for the project has been launched in 2009, www.kleinproject.org where more information can be found.

The Vignettes are being distributed via a Blog (www.blog.kleinproject.org) and are being trialed both in Brazil under the coordination of Yuriko Baldin and in New Zealand under the coordination of a part-time Research Assistant and Bill Barton. Another Research Assistant, Antoine Nectoux, is undertaking French translations and revisions.

8. IMU - COMMISSION FOR DEVELOPING COUNTRIES (CDC) AND ICMI'S SOLIDARITY ACTIONS INCLUDING CANP

In August 2009 the Adhering Organizations of IMU decided to set up a Commission for Developing Countries (CDC) (aiming at enhancing and expanding the successful work carried out by CDE and DCSG previously) with the mission to manage, strengthen and promote the programs of the IMU in developing and economically disadvantaged countries, to search for funding to support the corresponding activities, and to establish institutional partnerships with scientific organisations with common goals.

At the meeting of the IMU General Assembly in Bangalore, 2010 the CDC Terms of Reference were approved and the CDC leadership was elected. The CDC President is José-Antonio de la Peña (Mexico). The ICMI EC appoints one member of this Commission.

The ICMI 2010-2012 Executive Committee nominated Vice-President Angel Ruiz as member of this Commission (2010-2014). In 2011 the Commission held its first meeting in Berlin, Germany. Angel Ruiz represented ICMI in this meeting. In 2010, 2012 and 2013 ICMI received support from CDC for the Capacity and Networking Project (CANP) in Mali, Costa Rica and Cambodia.

ICMI President Ferdinando Arzarello participated in the second CDC meeting, which was held on March 9-10, 2013 in Berlin, where the MENAO (Mathematics in Emerging Nations: Achievements and Opportunities) symposium was discussed. Afterwards he also participated in the Friends of Mathematics Education (an initiative by EMS Committee for Education Symposium and supported by the German Telekom Foundation) that was held on March 14-15, 2013 also in Berlin, Germany.

ICMI Solidarity Fund

The ICMI Solidarity Fund was established by ICMI in 1992. Its purpose is to help the development of mathematics education in countries in which there is a need for it that justifies international assistance. In 2012, the money has been re-allocated to the CANP project where it is used to serve its intended purpose.

Capacity and Networking Project (CANP)

Arising from the UNESCO interaction, negotiations were successful in developing a project to enhance mathematics capacity in developing regions called the Capacity & Networking Project (CANP) - The Mathematical Sciences in the Developing World. CANP is a major development project of ICMI in conjunction with the International Mathematical Union (IMU) and UNESCO. It aims to enhance mathematics education in developing countries by supporting the educational capacity of those responsible for training mathematics teachers and creating sustained regional networks of teachers, mathematics educators and mathematicians and linking them to international support.

CANP 1, CANP EDIMath Sub Saharan Africa

The first CANP Program, CANP Sub-Saharan EDIMath was held for two weeks in **2011** in Mali with about 40 participants from five countries in the region.

The Mali CANP project was financially supported by UNESCO, the IMU Commission for Developing Countries, ICMI, the International Centre for Pure and Applied Mathematics (CIMPA), the SCAC of the Embassy of France in Mali, Joseph Fourier University in Grenoble and substantial support from the Ministry of Education, Literacy and National Languages of Mali. In addition, the FAST University of Bamako made freely available an Amphitheatre for the opening ceremony, a large room and a computer room for training and provided wireless internet access for participants.

More information can be found at:

<http://www.mathunion.org/icmi/other-activities/outreach-to-developing-countries/canp-project-2011-mali/>

The follow-up workshop took place in Senegal in September 2012 in Dakar.

CANP 2 Central America and the Caribbean

The second CANP Programme held its two-week workshop with about 40 participants from six countries in Costa Rica in August, 2012. The creation of the 'REDUMATEMATICACYC' - a professional community of mathematicians, educationalists, teachers, policy makers and institutions within and outside of the region was an important outcome of CANP Central America and the Caribbean. The workshop was financially supported by ICSU (Paris), the IMU and the IMU Commission for Developing Countries as well as ICMI, MEP, ICMAT Mexico, the University of Costa Rica and the Costa Rican Editorial Tecnologia.

The website is: <http://redumatematicacyc.net>. In 2013 the Network met (as a follow up) in November 6-8 in Santo Domingo, Dominican Republic.

CANP 3 South East Asia: The Third Capacity and Network Project (CANP) started with a two week workshop which was held from 14-25 October, 2013 in Phnom Penh, Cambodia with more than 40 participants from Cambodia, Laos, Thailand and Vietnam.

CANP 4 East Africa: The IPC and Local Organizing committee has been formed and started working in 2013. The fourth CANP will be held in 1-12 September 2014 in Tanzania with participants from Tanzania, Kenya, Uganda, and Rwanda.

CANP 5 Andean Region will be held in February 2016 in Peru. ICMI is currently fundraising for the workshop. Participants will come from Peru, Bolivia, Paraguay and Ecuador.

9. Collaboration with UNESCO and UNESCO

A nice evolution in the ICMI context for action in recent years is the renewal and strengthening of the relationships with UNESCO, which had been identified as an important objective by the 1999-2002 ICMI EC. Also UNESCO has recently been sponsoring several ICMI actions, especially as they concern the developing world.

Over the last years, ICMI has been sponsoring, jointly with UNESCO and other bodies, the development of a mathematical exhibition entitled “Experiencing mathematics”, whose aim is to improve the image of mathematics among the general public. Three copies of the exhibition are now available and are circulating internationally under UNESCO and ICMI auspices. Specific support for its presentation in various regions has been given in recent years by IMU and by ICMI. CIMPA and the French Ministry of Foreign Affairs have also provided support for the exhibition.

In 2010, one set of the exhibition finished its circulation in Latin America by returning to Santiago, Chile (Santiago University) for the first quarter of 2010. It was then in Cordoba (Spain) between September and October on the occasion of the XIII Congreso de Enseñanza y Aprendizaje de las Matemáticas of the THALES society (Sociedad Andaluza de Educación Matemática THALES).

The second set travelled in Asia, and an 18-month travel in Korea, with the support of NateSystem and KIDP (Korean Institute of Design Promotion) ended in Seoul in October, 2010.

The third set of the exhibition travelled in 2010 in Burkina Faso, in the cities Ouagadougou, Koudougou & Bobo Dioulasso.

In 2009, ICMI President Michèle Artigue was invited to contribute to a document about “The challenges of mathematics and basic science education” –to be published and disseminated by UNESCO in French, English and Spanish– by taking responsibility for the section on mathematics education. The document — 34 pages plus 14 appendices — was delivered to UNESCO in July 2009, and translation assistance into English was also provided. It was published later in 2010. The ICMI EC has adopted this document as a position statement on Mathematics Education for its own purposes.

Ferdinando Azarello met with Juste Jean-Paul Ngome Abiaga, UNESCO contact person, in Paris in March 2013 where he also attended the opening of the Mathematics of Planet Earth exhibition. Juste Jean-Paul Ngome Abiaga is also a member of the IPC of CANP Tanzania (2014).

10. COLLABORATION WITH ICSU

Since 2012 ICMI has also started a collaboration with the International Council of Scientific Unions (ICSU). ICSU has supported the CANP project in Costa Rica in 2012 with a generous grant of EURO 30,000. Additionally the president of ICSU Regional office Latin America (ICSU ROLAC) participated in the CANP Workshop held in Costa Rica.

ICSU also endorsed CANP South East Asia (the workshop was held 2013 in Cambodia) and is supporting CANP East Africa (Tanzania, 2014) with a grant of EURO 30,000. A staff member of ICSU Regional Office Africa (ICSU ROA) will also participate in the workshop held in Dar es Salam in September 2014.

11. THE ICMI AWARDS

In 2003, ICMI created two awards in mathematics education research: the Felix Klein Award, for lifelong achievement in mathematics education research, and the Hans Freudenthal Award, for a major programme

of research on mathematics education. These awards are announced every two years and conferred at the opening ceremonies of ICMEs.

The ICMI 2009 and 2011 Awards were presented at the ICME-12 Opening Ceremony to Gilah C. Leder (Australia) and Alan Schoenfeld (USA) who received the Felix Klein Medal for lifetime achievement and Luis Radford (USA) and Yves Chevallard (France) who received the Hans Freudenthal Medal for a major cumulative programme of research. Mogens Niss ended his term as the chair the ICMI Award Committee in 2010; two other members also completed their term on the Committee and were replaced (Only the name of the Chair is publicly known). Carolyn Kieran is the chair the ICMI Award Committee 2010-2014.

The ICMI **2013** Awards were announced in November 2013. The recipients are: Michele Artigue (France) - The Felix Klein Medal, and Frederick Leung (China) - The Hans Freudenthal Medal.

They will be presented at the ICME opening ceremony in Hamburg in July, 2016, alongside other two awardees to be selected towards the Congress.

A new award was established by the current EC: the Emma Castelnuovo Award for Excellence in the Practice of Mathematics Education. An Award Committee was appointed with Jeremy Kilpatrick as its Chair. (See <http://www.mathunion.org/icmi/activities/awards/emma-castelnuovo-award/>). The first award will be presented at ICME 14 in Hamburg, in 2016.

12. IMU/ICMI DIGITALISATION PROGRAMME

The ICMI Digital Library Project aims at providing open access to all ICMI publications and thematic Studies. Currently proceedings of the symposium organized in the year 2000 on the occasion of the centennial of L'Enseignement Mathématique, the official organ of ICMI, the first five ICMI Studies, ICMI Bulletins and the proceedings of various meetings and conferences are available for free download on the ICMI website: <http://www.mathunion.org/icmi/digital-library/introduction/>

The ICMI Digital Library was officially launched on July 1, 2009, with the posting online of the Proceedings of the symposium organized in 2000 on the occasion of the centennial of L'Enseignement Mathématique, the official organ of ICMI. A contract was signed with Cambridge University Press in June, 2010 to make this material available on the ICMI Website as well.

All Bulletins digitized with the help of IMU, the most recent Proceedings of ICMI Study meeting, and the ICMI Studies edited by CUP are all available online for the ICMI community. ICMI Studies will be made available for free on the ICMI website in 2015. (ICMI Studies 6-16)

13. DATABASE PROJECT

The Database Project, launched in 2011 has as its ultimate goal to build up a free access database of the mathematics curricula (ranging from pre-primary, primary, elementary, middle, secondary to vocational and undergraduate university level) from all over the world. Useful web links can be sent to the ICMI Secretary General. Currently information from 28 countries is available on the ICMI website.

<http://www.mathunion.org/icmi/activities/database-project/introduction/>

The database is already in use by researchers and curriculum-developers.

14. COMMUNICATION, OUTREACH AND ARCHIVE

In 2013 ICMI has decided to reorganize its channels of communication with professional organizations and the general public, as follows:

- Issue a Newsletter (ICMI News) three times a year (July 1, November 1, March 1) in order to post news, announce activities, and present reports. The newsletter will include a short editorial and will serve to disseminate ICMI information.
More information can be found here: <http://www.mathunion.org/icmi/publications/icmi-news/>
- Re-negotiate the terms with L'Enseignement Mathématique, as ICMI's official journal the Official Organ of ICMI
- Issue an annual report to IMU and a quadrennial report to the IMU GA
- Maintain regular contact with ICMI Country Representatives.
- Update the ICMI website, hosted on the IMU server in Berlin regularly.
- Use Facebook for the dissemination of news. The ICMI Facebook page was established in 2011 and has currently more than 2600 'friends' and 780 'likes'.
- Archives: The ICMI Achieve Curator Bernard Hodgson is responsible for collecting relevant information, proceeding etc. The data is stored in the IMU archive in the IMU Secretariat.

These channels of communication will cover all our outreach and archival needs and fulfil ICMI's statutory obligations. It was unanimously decided to discontinue the production of the Bulletin, whose functions will be fully covered by the four channels described above.

All communications are under the Editorship of the ICMI Secretary-General and Vice President Cheryl Praeger.

More information and details about ICMI activities can be found on the website: www.mathunion.org/icmi

ICMI Financial Report

ICMI Balances 2010 (1 January – 31 December)

BALANCE AS OF JANUARY 1:

ICMI • Canadian Dollars	12,537.74
• US Dollars	(106.96)
• Euros	64,677.09
Solidarity Fund (US Dollars)	39,426.29

Canadian Dollars Account:

Income:

Balance 2009	12,537.74
Interest	33.94
Total	<u>12,571.68</u>

Expenditure:

Purchase of copies of the ICMI Centennial volume	1,732.83
ICMI Bulletin: editing and translation of articles	525.00
bank charges (checks and foreign transfers)	10.69
ICMI balance 2010 (CAD account)	10,303.16
Total	<u>12,571.68</u>

US Dollars Account:

Income:

ICMI balance 2009	(106.96)
Grant from UNESCO: CANP Project	15,000.00
Royalties on ICMI Study volumes – 2009 (Springer)	1,619.79
Royalties on ICMI Study volumes – 2010 (Springer)	868.36
ICMI interest 0,00	
Solidarity Fund balance 2009	39,426.29
Solidarity Fund interest	112.95
Total	<u>56,920.43</u>

Expenditure:

ICMI/IMU Pipeline meeting, Valencia (October 2009)	3,474.00
ICMI EC meeting, Auckland (April 2010): travel of EC members	2,277.19
ICMI Study 20: conference, Lisbon (October 2010)	785.95
Travels and expenses of ICMI President	7,407.00
Bank charges (checks and foreign transfers)	180.13
Solidarity Fund support to a conference in Cambodia	5,000.00
ICMI balance 2010 (USD account)	3,256.92
Solidarity Fund balance 2010 (USD account)	34,539.24
Total	<u>56,920.43</u>

Euros Account:

Income:

Balance 2009	64,677.09
Interest	76.55
Total	<u>64,753.64</u>

Expenditure: 0,00

ICMI balance 2010 (EUR account)	64,753.64
Total	<u>64,753.64</u>

Average exchange rate, 2010: 1 USD = 1,03 CAD = 0,75 EUR
Bernard Hodgson managed the ICMI funds in Canada until February 1, 2011.

ICMI BALANCES 2011 (IN EURO)

		IN EURO
General Income	IMU Grant for 2010 AND 2011 ³	81,068.80 €
Savings	ICMI Balances 2010 as of 31.12.2010*	75,316.18 €
<i>Special</i> Income: Grant	ICMI Income: CIMPA Grant (for EdiMath/CANP)	1,800.00 €
<i>Special</i> Income: Grant	ICMI Income: CDC Grant (for EdiMath/CANP)	3,830.83 €
<i>Special</i> Income: Grant	ICMI Income: UNESCO Grant (for EdiMath/CANP)- 3 rd payment	3,808.94 €
<i>Special</i> Income: Grant	ICMI Income: Australian Mathematical Society for Klein Project 2010	2,694.05 €
Savings	ICMI Solidarity Fund*	26,767.60 €
Bank Interest	Bank Interest	171.89 €
	TOTAL BUDGET available for 2011:	195,458.29 €
ICMI Expenses:		
Klein Project	Klein Project 2010	2,584.89 €
ICM	ICM 2010	1,258.63 €
ICMI EC	ICMI EC Meeting 2010	2,602.05 €
ICMI Study	ICMI Study 20, Conference Lisboa	2,252.70 €
IMU	IMU Secretariat Inauguration, Berlin, 2011	239.64 €
ICMI EC	ICMI EC Meeting 2011 (China)	4,484.40 €
CANP Project	CANP/ EdiMath Mali (ICMI expenses)	26,660.68 €
ICMI Study	ICMI Study 18	100.00 €
Regional Conference	ICIAM Conference	1,647.90 €
ICMI Study	ICMI Study 21	2,060.21 €
Administration	Administrative Costs	356.70 €
Total Spending 2011		44,247.80 €
ICMI Savings	as of 31.12.2011	151,210.49 €

*Transferred from Canada in 2011 to Berlin

³ In 2010 ICMI did not receive the IMU grant as it was decided it would be transferred in 2011 to the new ICMI account in Berlin (IMU Secretariat).

ICMI Budget 2012 (in EURO)

ICMI Budget 2012 (Transaction)	Amount	Total	Balances
ICMI Balance as of 31.12.2011 <i>including the CAN Dollar Account, the USD Account and the Solidarity Fund</i>	151,210.49 €	151,210.49 €	
INCOME 2012			
Interest EURO Account Berlin 2012	597.06 €		
IMU allocation ICMI for 2012 (General Income)	55,274.90 €		
IMU (Special Income) for ICME 12	10,000.00 €		
IMU (Special Income) CANP Cambodia 2013	30,000.00 €		
IMU (Special Income) CANP Costa Rica 2012	30,000.00 €		
CDC Grant for CANP Costa Rica 2013	3,830.83 €		
Springer Royalties	351.78 €		
ICSU Grant for CANP Costa Rica	30,000.00 €		
Total Income 2012		160,054.57 €	
Total INCOME/ FUNDS ICMI 2012		311,265.06 €	
EXPENDITURE 2012			
ICMI Website	260.00 €		
Cost Credit Card Annual Fee	47.50 €		
BANK ACCOUNT Transfer Fees	1,543.14 €		
Total Administrative Cost		1,850.64 €	309,414.42 €
Total Conference Cambodia on Science and Mathematics Education		4,232.16 €	305,182.26 €
Total ICMI Study 22, IPC Meeting Oxford, January 2012		3,670.70 €	301,511.56 €
Proceedings of Rome 2008 (60 copies)	1,000.00 €	1,000.00 €	300,511.56 €
Seminar Michele Artique, Paris		1,919.00 €	298,592.56 €
ICMI General Secretary various travel cost (ICMI Study 20, EMF, ICME12 Site visit)	1,622.08 €	1,622.08 €	296,970.48 €
ICME 12 (including ICMI-EC meeting and GA costs)	64,090.92 €	64,090.92 €	232,879.56 €
CANP 1, (EdiMATH 2 Senegal 2012)		4,926.93 €	227,952.63 €
AFRICME 2013 Grant	3,914.92 €	3,914.92 €	224,037.71 €
EARCOME 2013 Grant	4,168.30 €	4,168.30 €	220,007,71 €
CANP 2 (Central American and the Caribbean, Costa Rica 2012)		68,929.41 €	151,078.30 €
Nepal visit Bill Barton (ICMI President)	1,304.67 €	1,304.67 €	149,773.63 €
Currency disparency	1,166.57 €	1,166.57 €	148,607.06€
Total spending ICMI in 2012		162,796.30	
Total savings (including funds in Canada)			148,607.06

ICMI BUDGET 2013

Category	ICMI Budget 2013		Sum of Category/ spending	Balances ICMI
ICMI INCOME				
General Income	IMU <i>General Income</i> to ICMI in 2013	€ 54,105.30		
Savings	ICMI Balances/ Savings (ICMI bank account in Berlin as of 01.01.2013)	€ 141,208.12		
Savings	Transfer ICMI bank accounts from Canada to Berlin bank account	€ 7,398.94	148,607.06	
Royalties/ special income	Springer Royalties for 2013	€ 328.93		
Bank Interest	Bank Interest 2013	€ 315.31		
Special Income	Grant from IMU - CDC 2013 CANP SEA 2013 ICMI	€ 8,000.00		
Special Income	ICMI <i>Special Income</i> from IMU (for CANP)	€ 50,000.00		
TOTAL BUDGET		€ 261,356.60		€ 261,356.60
ICMI EXPENSES 2013				
		Expenses		€ 261,356.60
ICMI President	Ferdinando Arzarello	€ 3,202.88	€ 3,202.88	€ 258,153.72
ICMI Secretary General	Abraham Arcavi	€ 1,159.50	€ 1,159.50	€ 256,994.22
ICME 12	ICME-12 Final payments	€ 1,193.76	€ 1,193.76	€ 255,800.46
ICMI Grants	MPE exhibition at UNESCO (1,000 USD)	€ 764.36		
	Science Festival US	€ 407.81		
	IMU 2013 Distribution Accromath magazine Africa (1,000 USD) (Mathematics of Planet Earth)	€ 764.45		
		€ 1,936.62	€ 1,936.62	€ 253,863.84
Administrative Cost	Annual fee credit card Service Fee	€ 47.75	€ 47.75	€ 253,816.09
ICMI Studies 19 and 22	ICMI 2013, Study 19 launch	€ 747.04		
	Transfer fees ICMI 2013, Study 19 launch	€ 36.55		
	ICMI Study 22, Grant (USD 5,000) for Oxford meeting	€ 3,905.91		
		€ 4,689.50	4,689.50 €	€ 249,126.59
ICMI Study 23 IPC Meeting Berlin	Travel cost IPC member	€ 291.60	€ 291.60	€ 248,834.99
CANP Central America	CANP Central America, follow up Year 2, Meeting Dominican Republic GRANT	€ 5,000.00		
	Transfer fees CANP Central America, GRANT	€ 36.55		
		€ 5,036.55	5,036.55 €	€ 243,798.44

ICMI Meeting Berlin 2012, September (hand over)	Travel costs	€ 1,540.16	€ 242,258.28	
ICMI EC meeting	Travel cost EC members to Berlin	€ 5,849.77	€ 5,849.77	€ 236,408.51
Klein Project	ICMI 2012 Klein Project 2013 Cambodia	€ 1,261.56		
	Klein meeting Berlin	€ 699.20		
		€ 1,960.76	€ 1,960.76	€ 234,447.75
ICMI EC Meeting RIO 2014	Travel cost, EC member	€ 1,569.02	€ 1,569.02	€ 232,878.73
CANP 3 Cambodia Workshop	CANP SEA workshop in, Cambodia 2013	€ 40,362.84	40,362.84 €	€ 192,515.89
CANP 3 & ERCOME	Preparation CANP 3 and ERCOME ICMI EC participation	€ 4,680.80	4,680.80 €	
Total Spending 2013			73,521.51 €	
Total Savings				€ 192,515.89

ICMI's principal source of 'core' income is an annual grant from the International Mathematical Union (IMU) that receives its financial support from IMU member countries. In 2012 and 2013 ICMI has received a special grant for CANP in Cambodia, Costa Rica and Tanzania (in the total order of 110,000 Euro).

In 2012 and 2013 ICMI received four grants from the IMU Secretariat for

- 1.) A "hand over" from the IMU EC 2010-2012 to IMU EC 2013-16;
- 2.) ICMI's annual Executive Commission (EC) meeting (in May 2013)
- 3) A visit by the ICMI Archive Curator Bernard Hodgson to the ICMI Archive in Berlin in 2013.
- 4.) A Klein meeting, held in September 2013 in Berlin. The Klein Meeting in Berlin additionally received a grant of EURO 8,000 from the German Research Foundation (DFG).

Since 2011 a part time staff member in the IMU Secretariat also supports ICMI (administration).⁴

The other sources of income for ICMI are grants from various organizations and foundations. ICMI received a grant in the order of EURO 30,000 in 2012 from ICSU for the Capacity and Network Project held in Costa Rica as well as a grant from UNESCO for CANP Mali. The ICMI EC approves the ICMI budget and all its related spending.

ICMI would like to thank IMU, IMU Secretariat at the WIAS Berlin, and the IMU Commission for Developing Countries (IMU-CDC), ICSU, UNESCO, and all individuals and institutions supporting and volunteering for ICMI worldwide very much for the continuous support and collaboration.

Ferdinando Arzarello, ICMI President
 Abraham Arcavi, ICMI Secretary- General
 Lena Koch, ICMI Administrator, IMU Secretariat

⁴ The IMU Secretariat is located in Berlin, Germany and hosted by the Weierstraß-Institut for Applied Analysis and Stochastics Leibniz-Institut at the Forschungsverbund Berlin e. V., and receives an annual subvention from the host country Germany to run all its administrative business, including the salary of the staff members.

Member Countries of ICMI 2013:

- A** Algeria
- Argentina
- Armenia
- Australia
- Austria
- B** Bangladesh
- Belgium
- Bosnia and Herzegovina
- Botswana
- Brazil
- Brunei Darussalam
- Bulgaria
- C** Cambodia
- Cameroon
- Canada
- Chile
- China
- Colombia
- Costa Rica
- Croatia
- Cuba
- Czech Republic
- D** Denmark
- E** Ecuador
- Egypt
- Estonia
- F** Finland
- France
- G** Georgia
- Germany
- Ghana
- Greece
- H** Hong Kong
- Hungary
- I** Iceland
- India
- Indonesia
- Iran
- Ireland
- Israel
- Italy
- Ivory Coast
- J** Japan
- K** Kazakhstan
- Kenya
- Republic of Korea
- Kuwait
- Kyrgyzstan
- L** Latvia
- Lithuania
- Luxembourg
- M** Madagascar

Malawi
Malaysia
Mexico
Moldova
Montenegro
Mozambique

N Nepal
Netherlands
New Zealand
Nigeria
Norway

O Oman

P Pakistan
Peru
Philippines
Poland
Portugal

R Romania
Russia

S Saudi Arabia
Senegal
Serbia
Singapore
Slovakia
Slovenia
South Africa
Spain
Swaziland
Sweden
Switzerland

T Thailand
Tunisia
Turkey

U Ukraine
United Kingdom
United States of America
Uruguay

V Venezuela
Vietnam

Z Zambia